12. A method for screening for molecules having an affinity for an active protein in a complex mixture of proteins from a biological source, employing a combinatorial chemical library comprising a plurality of members of the formula R*(F-L)-X wherein: X is a ligand having the same chemical structure for each of said members of said library; L is a bond or alkylene or an alkyleneoxy chain linking group of from 1 to 6 alkyleneoxy groups, wherein said alkyleneoxy groups are of from 2 to 3 carbon atoms, which is the same in each of the members of said library; F is a sulfonyl functional group reactive at an active site of a protein member, which functional group comprises the same reactive functionality in each of the members of said library; and R is a group of less than 1 kDal, that is different in each of the members of the library; the * intends that R is a part of F or L; and wherein members of said library have different on rates with said protein member; said method comprising: (1) combining with said complex mixture, in an active form and an inactivated form, said combinatorial chemical library under conditions for reaction of said functional group with active proteins to form a conjugate; (2) isolating conjugates from said active and inactivated complex mixture; and (3) comparing conjugates formed with said active and inactivated complex mixtures; whereby conjugates in said active complex mixture absent in said inactivated complex mixture are comprised only of active proteins reactive with members of said combinatorial library.

13. A method according to claim 12, wherein each of said members of said combinatorial library is isotopically individually labeled, said method including the additional steps of: isolating conjugates from said active complex mixtures; and analyzing said conjugates for the composition of said probe by means of said isotopic individual label and for the composition of said protein by at least partial sequencing.

09/836,145